



**Shell Oil Products US**

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BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

Martinez Refinery

PO Box 711

Martinez, CA 94553-0071

Tel (925) 313-3000

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**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

5066  
5038, 5047, 5046,  
5009, 5010, 5043, 5011, 5044  
5041, 4992, 5042, 4993,  
4974, 4976, 5039, 5040  
4903, 4978, 4964, 4998, 4973.

DEVIATION

BAAQMD DEV.#

DATE REC'D

1/18/2018

January 10, 2018

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105  
Attn: Title V Reports

**Subject:      Semi-Annual Title V Deviation Summary Report  
                 July 1, 2017 – December 31, 2017**

To Whom It May Concern:

Please find Shell Oil Products US, Martinez Refinery's Semi-Annual Title V Deviation Summary report for the period of July 1, 2017 through December 31, 2017. This report includes a summary of the inoperable monitors for the second half of 2017.

The refinery's Responsible Official, Tom Rizzo, has signed the reports.

If you have any questions regarding this matter, please contact Kathy Wheeler at (925) 313-3722.

Sincerely yours,

Gordon Johnson  
Manager, Environmental Affairs Department  
Shell Oil Products US, Martinez Refinery

Attachments

BAAQMD Title V Permit  
6 Month Deviation Summary Report  
From 7/1/2017 to 12/31/2017

**A0011 Shell Oil Products US Martinez Refinery**

Facility Address:

3485 Pacheco Blvd

Mailing Address

PO Box 711

City: Martinez

State: CA

Zip Code: 94553-0071

City: Martinez

State: CA

Zip Code: 94553-0071

Contact: Liz Rosales

Title: Environmental Speciali

Phone: (925) 313-3857

*Title V deviations for the reporting period are summarized below:*

4903

Event Started: 7/22/2017 3:27 PM

Stopped: 7/22/2017 3:32 PM

☐ Ongoing Event

Source Number: 1A1470

Abatement Device :

Emission Point:

May have resulted in a violation of :

Permit:

AQMD: Reg 9 Rule 2 Sec 301

Other:

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2342 at the Ace Hardware site, showed an indicated excess of greater than 60ppb in a 3 minute average.

Probable Cause: Problem with flare vapor recovery compressor resulted in a 9 minute flaring event. GLM spiked during flaring event.

Corrective actions or preventative steps taken: The problem with the compressor was quickly corrected to stop the flaring.

4978

Event Started: 8/16/2017 3:57 PM  
 Stopped: 8/17/2017 2:31 PM ☐ Ongoing Event

Source Number: 1134  
 Abatement Device : \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Reg 8 Rule 5, Sec 306.2  
 Other: \_\_\_\_\_

Event Description: A tank roof hatch cover for the independent high level alarm was found leaking >100ppm on TK-1134 (S-1134).

Probable Cause: The seal/gasket failed on the hatch.

Corrective actions or preventative steps taken: Repairs were made to seal the leak.

4964

Event Started: 9/7/2017 4:35 AM  
 Stopped: 9/7/2017 5:55 AM ☐ Ongoing Event

Source Number: 4201  
 Abatement Device : \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 12 Rule 11 Sec 503  
 Other: 40 CFR 60.18

Event Description: While isolating fuel to the DC Clean Fuels Flare (S-4201) pilots to the South field, the natural gas was inadvertently isolated to the North Field as well which caused a loss of all pilots to the flare. There was no flaring or venting during this time (the water seal was intact).

Probable Cause: Labeling was confusing on piping.

Corrective actions or preventative steps taken: The natural gas was restored to the north field as soon as the problem was discovered. The piping and valves were re-labeled to make it more clear.

4996

Event Started: 7/8/2017 8:00 AM  
 Stopped: 9/1/2017 8:00 AM ☐ Ongoing Event

Source Number: 1755  
 Abatement Device : \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 8 Rule 5 Sec. 401  
 Other: \_\_\_\_\_

Event Description: We did not meet Reg 8 Rule 5 Sec 401 requirements to inspect our tank seals on TK-1334 (S-1755) and TK-1147 (S-1147) no later than 8 months from the last inspection date.

Probable Cause: Mis-communication between operations and tank inspection contractor led to belief that tanks had been inspected within the 8 month period.

Corrective actions or preventative steps taken: The tanks were immediately inspected when the problem was discovered and were found in compliance. Operations and the contractor discussed the importance of communication and timely submittal of tank inspection reports.

4973

Event Started: 9/20/2017 6:43 AM  
 Stopped: 9/20/2017 2:19 PM ☐ Ongoing Event

Source Number: 4001  
 Abatement Device: \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of:  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 10  
 Other: 40 CFR 60.104(a)(1)

Event Description: Refinery Fuel Gas H2S analyzer 9A1610 showed an indicated excess of the 162 ppm 3 hour average limit for H2S in RFG.

Probable Cause: A plug in the caustic system during shutdown of the Vent Gas Treater DEA column for a required inspection resulted in excess H2S to the fuel gas system.  
 Corrective actions or preventative steps taken: The shutdown of the DEA column was stopped and the column returned to service as quickly as possible.

4974

Event Started: 9/20/2017 7:33 AM  
 Stopped: 9/21/2017 9:15 AM ☐ Ongoing Event

Source Number: 4001  
 Abatement Device: \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of:  
 Permit: PC 12271 Part 15  
 AQMD: Regulation 10  
 Other: 40 CFR 60.104(a)(1)

Event Description: RFG H2S analyzer 9A2831 showed an indicated excess of 162 ppm 3 hour average and 50 ppm daily average limit to Clean Fuels

Probable Cause: A plug in the caustic system during shutdown of the Vent Gas Treater DEA column for a required inspection resulted in excess H2S to the fuel gas system.  
 Corrective actions or preventative steps taken: The shutdown of the DEA column was stopped and the column returned to service as quickly as possible.

4976

Event Started: 9/25/2017 12:20 AM  
 Stopped: 9/25/2017 2:31 AM ☐ Ongoing Event

Source Number: 4001  
 Abatement Device: \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of:  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 10  
 Other: 40 CFR 60.104(a)(1) 400

Event Description: Refinery fuel gas H2S analyzer 9A1610 showed an indicated excess of the 162 ppm 3 hour average limit for H2S in RFG.

Probable Cause: High level in the caustic relief drum during shutdown of the VGT DEA column for required internal inspection.  
 Corrective actions or preventative steps taken: The DEA column was immediately put back on line.

5089

Event Started: 10/9/2017 4:59 PM  
Stopped: 10/9/2017 9:50 PM ☐ Ongoing Event

Source Number: 52A1265  
Abatement Device: S7000  
Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
Permit: \_\_\_\_\_  
AQMD: Regulation 9 Rule 2 Section 30  
Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed an indicated excess of the 60 ppb 3-minute average H2S limit and the 30-ppb hourly average H2S limit.

Probable Cause: Dissolved oxygen dropped in ETP3 during blower maintenance resulting in anaerobic conditions. When the blower was put back in service H2S was released resulting in the GLM excess.  
Corrective actions or preventative steps taken: The blower was shut down again.

5039

Event Started: 10/10/2017 9:27 PM  
Stopped: 10/11/2017 4:00 AM ☐ Ongoing Event

Source Number: 52A1265  
Abatement Device: S7000  
Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
Permit: \_\_\_\_\_  
AQMD: Regulation 9 Rule 2 Section 30  
Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed an indicated excess of the 60 ppb 3-minute average H2S limit and the 30-ppb hourly average H2S limit. The 3 minute average was exceeded on 10/10 from 21:27 - 21:37 and on 10/11 from 00:28 - 00:36 and 2:03 - 2:06. The hourly average limit was exceeded from 3:38am - 4:00 am

Probable Cause: A blower on ETP 3 was put back in service resulting in the GLM excess.  
Corrective actions or preventative steps taken: The blower was shut down.

5040

Event Started: 10/12/2017 8:12 PM  
Stopped: 10/12/2017 8:20 PM ☐ Ongoing Event

Source Number: 52A1265  
Abatement Device: S7000  
Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
Permit: \_\_\_\_\_  
AQMD: Regulation 9 Rule 2 Section 30  
Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed an indicated excess of the 30-ppb hourly average H2S limit. The hourly average limit was exceeded from 20:12 - 20:20(daylight savings time)

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.  
Corrective actions or preventative steps taken: Consulted wastewater treating experts and working to add oxidizer to the tank to neutralize the H2S.

5041

Event Started: 10/16/2017 6:20 PM  
 Stopped: 10/16/2017 7:16 PM ☐ Ongoing Event

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed an indicated excess of the 60 ppb 3 minute H2S limit and the 30-ppb hourly average H2S limit. The 3 minute limit was exceeded from 18:20-18:37 and the hourly average limit was exceeded from 18:46 - 19:16 (daylight savings time)

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.  
 Corrective actions or preventative steps taken: Adding oxidizer to the tank to neutralize the H2S.

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 2 Section 30  
 Other: \_\_\_\_\_

4992

Event Started: 10/17/2017 9:13 AM  
 Stopped: 10/18/2017 5:59 AM ☐ Ongoing Event

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed indicated exceedance of the 60 ppb 3 minute H2S limit and an excess of the hourly 30ppb limit. The limit was exceeded at various times in the day and activity continued through midnight.

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.  
 Corrective actions or preventative steps taken: Ongoing addition of oxidizer to the tank to neutralize the H2S.

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 2 Section 30  
 Other: \_\_\_\_\_

5042

Event Started: 10/18/2017 12:01 AM  
 Stopped: 10/18/2017 11:29 PM ☐ Ongoing Event

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed indicated excesses of the 60 ppb 3 minute H2S limit and the 30-ppb hourly average H2S limit during the day.

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.  
 Corrective actions or preventative steps taken: Ongoing addition of oxidizer to the tank to neutralize the H2S.

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 1 Section 30  
 Other: \_\_\_\_\_

A993

Event Started: 10/19/2017 11:35 PM  
 Stopped: 10/19/2017 11:39 PM ☐ Ongoing Event

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 rule 2 Section 301  
 Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed indicated exceedance of the 60 ppb 3 minute H2S limit at 11:35 pm (daylight savings time)

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.

Corrective actions or preventative steps taken: Ongoing addition of oxidizer to the tank to neutralize the H2S.

5009

Event Started: 10/20/2017 12:57 PM  
 Stopped: 10/21/2017 2:16 PM ☐ Ongoing Event

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: Regulation 9 Rule 1 Section 30  
 AQMD: \_\_\_\_\_  
 Other: \_\_\_\_\_

Event Description: Ground Level Monitor(GLM) H2S analyzer (S-2344) at the ETP Site showed indicated excesses of the 60 ppb 3 minute and the 30 ppb hourly average H2S limit on October 20th and 21st.

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.

Corrective actions or preventative steps taken: Ongoing addition of oxidizer to the tank to neutralize the H2S.

5019

Event Started: 10/30/2017 11:23 PM  
 Stopped: 10/30/2017 11:29 PM ☐ Ongoing Event

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 2 Sec 301  
 Other: \_\_\_\_\_

Event Description: Ground level Monitor (GLM) H2S analyzer S-2344 at the ETP Site showed indicated exceedance of the 60 ppb 3 minute average H2S limit.

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.

Corrective actions or preventative steps taken: Ongoing addition of oxidizer to the tank to neutralize the H2S.

5048

Event Started: 10/31/2017 5:10 AM  
 Stopped: 10/31/2017 11:42 PM ☐ Ongoing Event

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: S-7000

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Reg 9 Rule 1 Sec 301  
 Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer (S-2344) at the ETP site showed an indicated excess of the 60 ppb 3 minute average and the 30 ppb hourly average. H2S limit due to an upset of ETP #3.

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.

Corrective actions or preventative steps taken: Ongoing addition of oxidizer to the tank to neutralize the H2S.

5011

Event Started: 11/1/2017 1:11 AM  
 Stopped: 11/1/2017 5:52 PM ☐ Ongoing Event

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: S-7000

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 1 Sec 301  
 Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer (S-2344) at the ETP site showed an indicated excess of the 60 ppb 3 min average and the 30 ppb hourly average H2S. limit due to an upset at ETP #3

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.

Corrective actions or preventative steps taken: Oxidizer was added to the tank to neutralize the H2S.

5044

Event Started: 11/2/2017 10:19 AM  
 Stopped: 11/2/2017 2:39 PM ☐ Ongoing Event

Source Number: 52A1265  
 Abatement Device : S7000  
 Emission Point: S-7000

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 1 Section 30  
 Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer (S-2344) at the ETP site showed an indicated excess of the 60 ppb 3 min average and the 30 ppb hourly average H2S. limit due to an upset at ETP #3

Probable Cause: Operational issues on the ETP3 biotreater resulted in anaerobic conditions and the evolution of H2S.

Corrective actions or preventative steps taken: Oxidizer was added to the tank to neutralize the H2S.



5038

Event Started: 11/27/2017 3:32 AM  
 Stopped: 11/27/2017 3:33 AM ☐ Ongoing Event

Source Number: \_\_\_\_\_  
 Abatement Device : \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 9 Rule 1 Section 30  
 Other: \_\_\_\_\_

Event Description: Ground Level Monitor (GLM) H2S analyzer (S-2344) at the ETP site showed an indicated excess of the 60 ppb 3 min average.

Probable Cause: No source could be positively identified as the excess occurred during a heavy rainstorm with very strong winds.

Corrective actions or preventative steps taken: Operations investigated when the excess occurred using handheld meters looking for a source. No source could be found and the excess was over very quickly.

5047

Event Started: 11/30/2017 1:00 PM  
 Stopped: 12/1/2017 11:15 AM ☐ Ongoing Event

Source Number: 1134  
 Abatement Device : \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 8 Rule 5, Section 30  
 Other: \_\_\_\_\_

Event Description: A tank roof hatch cover was found leaking > 100ppm on TK-1134, S-1134.

Probable Cause: The seal around the hatch cover was leaking.

Corrective actions or preventative steps taken: Repairs were completed by sealing the leaks with RTV.

5046

Event Started: 11/30/2017 12:30 PM  
 Stopped: 11/30/2017 2:45 PM ☐ Ongoing Event

Source Number: 610  
 Abatement Device : \_\_\_\_\_  
 Emission Point: \_\_\_\_\_

May have resulted in a violation of :  
 Permit: \_\_\_\_\_  
 AQMD: Regulation 8 Rule 5, Section 30  
 Other: \_\_\_\_\_

Event Description: Two tank roof hatches were found leaking > 100ppm on TK-610, S-610. Repairs have been completed.

Probable Cause: The seal around the hatches was leaking due to cracks in the sealant.

Corrective actions or preventative steps taken: Repairs were completed by sealing the leaks with RTV.

5066

Event Started: 12/21/2017 7:43 PM
Stopped: 12/22/2017 4:26 AM <input type="checkbox"/> Ongoing Event

Source Number: 4002
Abatement Device : A4002
Emission Point: _____

May have resulted in a violation of:
Permit: Title V Condition 12271 Part 35
AQMD: _____
Other: _____

Event Description: DCU heater F-13425 A&B (Source #4002, 4003) exceeded the 10 ppm 3 hour average Title V NOX limit due to loss of SCR ammonia injection skid

Probable Cause: Power failure resulted in loss of SCR ammonia injection skid

Corrective actions or preventative steps taken: Ammonia system was returned back to normal service after power loss

### Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.

X Thomas S Euro EU-Skyl Monitor Ref. 1/8/18  
Signature of Responsible Official Print Name Title Date

**BAAQMD Title V Permit  
6 Month Monitoring Report  
From 7/1/2017 to 12/31/2017**

<b>A0011 Shell Oil Products US Martinez Refinery</b>	
<b>Facility Address:</b> 3485 Pacheco Blvd	<b>Mailing Address:</b> P.O. Box 711
<b>City:</b> Martinez	<b>City:</b> Martinez
<b>State:</b> CA	<b>State:</b> CA
<b>Zip Code:</b> 94553-0071	<b>Zip Code:</b> 94553-0071
<b>Contact:</b> Liz Rosales	<b>Title:</b> Environmental Specialist
	<b>Phone:</b> (925) 313-3857

*Inoperable monitors as defined by BAAQMD Regulations 1-522 and 1-523 for the reporting period are summarized below:*

Started	Stopped	Source (SN)	Abatement Device (AD)	Emission Point (EP)	Fuel	CEM	GLM	Gas Parameter	NOx	SO2	CO	H2S	TRB	NH3	O2	CO2	H2O	LTA	Lead	Steam Flow	Wind Dir.	Speed	dt	Temp	VOC	Gauge Press.
7/1/2017 7:50 AM	7/14/2017 2:42 PM																									
Event Description: FCCU regen CO2 analyzer 5A2292 failed morning validation yesterday and it will require new parts and will be out of service for greater than 24 hours.																										
8/20/2017 7:45 AM	8/24/2017 4:45 PM																									
Event Description: RIC to clean fuels H2S analyzer 9A2831/2825 failed morning validation yesterday and will be out of service for greater than 24 hours for maintenance.																										
12/25/2017 10:40 AM	12/26/2017 3:25 PM																									
Event Description: 14A4275 (NOx) and 14A4276 (O2) analyzers on F-102 failed due to plugged stack filter.																										

**Certification Statement**

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.

X Thomas S. Rizzo Thomas S. Rizzo Env. Shell Martinez Ref. 1-8-18  
Signature of Responsible Official Print Name Title Date